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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,952	12/05/2001	Yves Schabes	2001323-0014	8503
24280 7590 07/26/2007 CHOATE, HALL & STEWART LLP TWO INTERNATIONAL PLACE BOSTON, MA 02110			EXAMINER TO, BAOQUOC N	
			ART UNIT 2162	PAPER NUMBER
			MAIL DATE 07/26/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/004,952

Applicant(s)

SCHABES ET AL.

Examiner

Baoquoc N. To

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05/15/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 16, 17, 20, 21, 25, 27, 39 and 64-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 16, 17, 20, 21, 25, 27, 39 and 64-68 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1 and 66 are amended in the amendment filed on 05/16/2007. Claims 1-6, 16-17, 20-21, 25, 27, 3436, 39, 64-68 are pending in this application.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1 and 66 have been considered but are moot in view of the new ground(s) of rejection.

The recent amendment has over come the 101 rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1-3, 21, 25, 27, 34-36, 39 and 64-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US. Patent No. 6,081,804) in view of Masand et al. (US. Patent No 6,131,092).

Regarding on claims 1 and 66, Smith teaches a method of fulfilling an information need, comprising the steps of:

receiving a query comprised of one or more fully specified terms (word, cat...hat) (col. 5, lines 52-67 and col. 3, lines 3-6); and

determining one or more matches for the query, wherein a criterion for determining one of said matches specifies that a relative order of at least one term of said query need not be preserved with respect to at least one other term included in the query (if the user, wants to search a search space for objects where the word "cat" preceded the word hat where the result be always be first cat retrieval word and hat) (col. 3, lines 15-23 and col. 5, lines 7-51);

displaying the one or more matches (an output device 104, such as a CRT monitor, on which the results of searches are displayed) (col. 4, lines 23-24).

Smith does not explicitly disclose one or more at least partially unspecified terms; however, Smith discloses a variety of wildcards including space parameters such as cat...hat (\*, ?, /..) (col. 5, lines 52-67 and col. 3, lines 3-6). On the other hand, Masand discloses one or more at least partially unspecified terms (as to corresponding to a query also comprises a series of symbols, which also represent a word, number or other searchable feature) (col. 2, lines 26-28). These symbols in the query are unspecified terms which require to be searched. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Smith's system to include symbols taught by Masand in order to retrieve documents with terms and symbols as an input.

Regarding claim 2, Smith teaches identifying documents in an index that contain the one or more at least partially unspecified terms, the index including preanalyzed text terms appearing within a plurality of documents (col. 6, lines 1-49).

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Regarding on claim 3, Smith teaches converting the query into a finite state machine; and matching the finite state machine against the identified contexts (col. 6, lines 1-49).

Regarding on claim 21, Smith teaches the score reflects the number of times an instance of the match is located among the plurality of documents (col. 2, lines 7-19).

Regarding on claim 25, Smith teaches ranking the documents that contain a match, and wherein the second outputting step comprises outputting the document identifiers or locations of the documents that contain a match in an order based on the ranking weight) (col. 2, lines 7-19).

Regarding on claim 27, Smith teaches said one or more partially unspecified terms includes a syntactic or a morphological restriction (lower case or upper case) (col. 6, lines 1-49).

Regarding on claim 34, Smith teaches the index comprises locations of terms within documents (the object must be found in the first page) (col. 6, lines 1-49).

Regarding on claim 35, Smith teaches determining the location of a term in the query within a document using the index; and locating a match for the query based on the location of the term within the document (col. 3, lines 7-12).

Regarding on claim 36, Smith teaches ranking a plurality of the located matches or portions thereof (weight) (col. 2, lines 7-19).

Regarding on claim 39, Smith teaches the ranking is based on one or more features selected from the list consisting of the location of a match within a document, a

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weight assigned to a document that contains a match, the age of a document that contains a match, the source of a document that contains a match, and a format feature of a match within a document (col. 2, lines 7-19).

Regarding on claims 64 and 67, Smith teaches the query includes a delimiter indicating a first portion of said query for which a relative order is preserved for one or more terms included in said portion, said relative order being in accordance with a physical position of each term in said first portion with respect to any other terms in said first portion (col. 6, lines 1-49).

Regarding on claims 65 and 68, Smith teaches one of said at least partial unspecified terms includes a predefined character sequence representing a matching restriction that defines at least one of: a syntactical criteria, a morphological criteria, and a criteria defined in accordance with a determination by a computer program, and said one or more matches for the query are determined in accordance with said matching restriction (col. 6, lines 1-49).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US. Patent No. 6,081,804) in view of Masand et al. (US. Patent No 6,131,092) and further in view of Lee et al. (US. Pub. No. 2001/0044720 A1).

Regarding on claim 17, Smith and Masand do not teach the documents are accessible over the Internet. However, Lee teaches documents are accessible over the Internet (paragraph 0005). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Smith and Masand systems to include documents are accessible over the Internet by Lee in order to retrieve documents from the distance.

Regarding on claim 18, Smith and Masand do not teach the documents comprise World Wide Web pages. However, Lee teaches teach the documents comprise World Wide Web pages (paragraph 0005). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Smith and Masand systems to include documents comprise World Wide Web pages by Lee in order to retrieve documents from the distance.

5. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US. Patent No. 6,081,804) in view of Masand et al. (US. Patent No 6,131,092) and further in view of Hobbs (US. Patent No. 6,523,022 B1).

Regarding on claim 20, Smith and Bellinger do not teach assigning a score to a match. However, Hobbs discloses assigning a score to a match (as to underpush, computers sift through large volume of information, filtering, retrieving and then ranking

in order of importance articles of current interest.." (col. 4, lines 38-40). This suggests the concept of scoring the document depend on their match. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the teaching of Smith and Masand to include ranking the importance in order of importance articles as taught by Hobs in order to display to the user in according of their relevancy.

6. Claims 4-6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US. Patent No. 6,081,804) in view of Masand et al. (US. Patent No 6,131,092) and further Hunter (US. Patent No. 6,018,735).

Regarding on claim 4, Smith and Masand do not teach the finite state machine is a finite state transducer. However, Hunter teaches the finite state machine is a finite state transducer (finite-state automata include three types of states: initial state, intermediate states, and terminal states). This suggests the usage of the finite state machine for searching. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify both Smith and Masand to include finite state machine for retrieving relevant documents using the inputted words and symbols.

Regarding on claim 5, Smith and Masand do not teach the finite state machine allows for the appearance of fully specified and at least partially unspecified terms in any order in a potential matching context. However, Hunter teaches the finite state machine allows for the appearance of fully specified and at least partially unspecified



terms in any order in a potential matching (finite-state automata include three types of states: initial state, intermediate states, and terminal states). This suggests the finite state machine to allow the appearance of the fully specified and at least partial specified term in the order in a potential matching context. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify both Smith and Masand to include finite state machine allows for the appearance of fully specified and at least partially unspecified terms in any order in a potential matching context as taught by Hunter in order to retrieves relevant documents using the inputted words and symbols.

Regarding on claim 6, Smith and Masand do not teach the finite state machine allows for one or more intervening words between the fully specified and at least partially unspecified terms in a potential matching context. However, Hunter teaches the finite state machine allows for one or more intervening words between the fully specified and at least partially unspecified terms in a potential matching context (finite-state automata include three types of states: initial state, intermediate states, and terminal states). This suggests the finite state machine to allows for one or more intervening words between the fully specified and at least partially unspecified terms in a potential matching context. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify both Smith and Masand to include finite state machine allows one or more intervening words between the fully specified and at least partially unspecified terms in a potential matching context as

taught by Hunter in order to retrieves relevant documents using the inputted words and symbols..

Regarding on claim 16, Smith and Masand do not teach the contexts are stored as finite state machines. However, Hunter teaches the contexts are stored as finite state machines (finite-state automata include three types of states: initial state, intermediate states, and terminal states). This suggests the contexts are stored as finite state machines. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify both Smith and Masand to include contexts are stored as finite state machines as taught by Hunter in order to retrieves relevant documents using the inputted words and symbols.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Contact Information**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is at 571-272-4041 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached at 571-272-4107.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:


Commissioner of Patents and Trademarks  
Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

(703) 872-9306 [Official Communication]

BQ. To

July 21, 2007

  
SHAHID ALAM  
PRIMARY EXAMINER